The State of South Carolina

Department of Consumer Affairs

2801 DEVINE STREET
P. O. BOX 5757
COLUMBIA, S.C. 29250-5757

EQUAL OPPORTUNITY EMPLOYER

STEVEN W. HAMM
ADMINISTRATOR
AND
CONSUMER ADVOCATE

October 25, 1991

The Honorable Charles W. Ballentine, Executive Director
South Carolina Public Service Commission
Post Office Drawer 11649
Columbia, South Carolina 29211

Re: Duke Power Company, Docket No. 91-216-E

Dear Mr. Ballentine:

Enclosed please find the Consumer Advocate's Proposed Findings in the above referenced case. By copy of this letter, I hereby certify that I have served a copy of the Proposed Findings on all parties of record.

Sincerely,

Nancy J. Vaughn

Nancy J. Vaughn
Staff Attorney

cc: Steve C. Griffith, Jr., Esquire
William Frederick Austin, Esquire
Arthur G. Fusco, Esquire
Jasper P. Rogers
William Booth, Esquire

STATE OF SOUTH CAROLINA

BEFORE THE SOUTH CAROLINA PUBLIC SERVICE COMMISSION

DOCKET NO. 91-216-E

POSTED 10/28/91

IN THE MATTER OF: Application of Duke Power Company For Authority to Adjust and Increase its Electric Rates and Charges.	)	CONSUMER ADVOCATE'S PROPOSED FINDINGS

S.C. PUBLIC SERVICE COMMISSION RECEIVED OCT 25 1991

S.C. PUBLIC SERVICE COMMISSION OCT 28 1991 RECEIVED UTILITIES DIVISION

Steven W. Hamm
Consumer Advocate

Raymon E. Lark, Jr.
Deputy Consumer Advocate

Nancy J. Vaughn
Staff Attorney

Elliott F. Elam, Jr.
Staff Attorney

South Carolina Department
of Consumer Affairs
Post Office Box 5757
Columbia, SC 29250-5757
(803) 734-9464

October 25, 1991

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I. INTRODUCTION

This matter comes before the South Carolina Public Service Commission (the Commission) by way of an Application filed on May 17, 1991, by Duke Power Company (Duke or the Company), whereby the Company sought certain relief in the nature of the approval of certain adjustments and increases in its retail rates and charges for the electrical services rendered by the Company, subject to the jurisdiction of the Commission, effective for services in accordance with the terms and conditions of S.C. Code Ann. § 58-27-860 (1976) and R. 103-830, et seq. of the Rules and Regulations of the Commission. According to the Application, the proposed rates and charges, which were attached to the Application would have increased revenues by $72,542,000 or approximately 7.29%. At the hearing, the Company revised its request to approximately $68.4 million.

The proposed increase was distributed among classes of customers by increasing residential revenues by 9.08%; general service revenues, 7.96%; industrial revenues, 5.96%; and outdoor lighting revenues, 6.18%. Different percentage increases were proposed because of disparity in rates of return between customer classes.

Petitions to Intervene were received from Steven W. Hamm, Consumer Advocate for the State of South Carolina (the Consumer Advocate), the South Carolina Energy Users Committee (SCEUC), Jasper P. Rogers, and Clifton Power

Corporation. Those petitions were allowed by the Commission.

A public hearing commenced in the Commission's offices September 23, 1991. A night hearing was held in Greenville, South Carolina October 7, 1991. Briefs and/or Proposed Findings were filed October 25, 1991.

II. ACCOUNTING AND RATE BASE ADJUSTMENTS

A. Working Capital

The Company, the Staff, and the Consumer Advocate filed testimony concerning the working capital computation. All three parties computed the cash allowance component or working capital by application of the one-eighth formula traditionally used by the Commission, although Consumer Advocate witness Miller indicated that he was using this method for the purposes of this proceeding and this his preference was that the cash component be based upon the results of a lead-lag study. Tr. vol. 5, Miller at 12.

However, even though the parties agreed concerning the methodology to be used, there was disagreement as to the amounts that were to be included therein. After computing the 1/8th of operation and maintenance expenses exclusive of purchased power and nuclear fuel expenses less accrued taxes (to which there was no disagreement between the parties), the Company included an allowance for required bank balances, bond reacquisition premium, prepayments, and miscellaneous deferred debits and credits. The Consumer Advocate challenged the amount included for required bank balances, bond reacquisition premium, and miscellaneous deferred debits and credits. Tr. vol. 5, Miller at 12-14.

Instead of including the required bank balances associated with compensating balance requirements for the lines of credit in banks which require that a compensating balance be maintained in the account or penalty charges will be incurred, for working funds which are required in order to conduct day-to-day operations, and miscellaneous special deposits, the Company has simply included its end-of-period cash balance held in each account. Tr. vol. 4, Stimart at 66-69; Hearing Exhibit 30. We agree with the Consumer Advocate that the minimum bank balances (as the name indicates) should be limited to the compensating bank balances that are required in order to eliminate fees and to meet the day to day cash requirements, and not on all cash held in the bank at the discretion of the Company. If it were the Commission's intent to allow the Company to earn a return on all cash balances, we would change the name of the working capital component from minimum bank balances to simply cash held in banks. Moreover, this is not our intent because this would be inconsistent with the definition of working capital, i.e. that it is the amount above that invested in plant in service which is _necessary_ to meet the day to day operations of the utility.

The evidence clearly shows that, of the total company cash held in banks amounting to $6,027,000, only $508,500 is required as compensating bank balances. This amount, when added to the working funds of $2,071,000, and the miscellaneous special deposits of $111,000, generates a total minimum bank balance of $2,691,000, and a jurisdictional balance of $700,000. Hearing Exhibit 36, Schedule PEM 2.2.

The Company has included a total company allowance for a bond reacquisition premium of $42,237,000. This amounts to $10,906,000 after allocation to this jurisdiction. These amounts, though, relate to both electric and non-electric operations, with the non-electric operations amounting to 3%. The Company does not dispute the 3% portion associated with non-electric operations. Tr. vol. 4, Stimart at 64-66. The Commission is of the opinion that the stockholders are not entitled to earn a return on operations that are not associated with the increase in electric rates, and therefore we agree with the Consumer Advocate that the working capital allowance should be reduced to reflect the portion associated with non-electric operations. The Company's proposed allowance should be reduced by $327,000. _Id._ at 66.

The Company has included miscellaneous deferred debits and credits of $9,844,000 in working capital. Consumer Advocate witness Miller testified that these amounts should not be included in working capital unless they were considered in a lead-lag study and that these items are not regularly included in working capital by this Commission. Tr. vol. 5, Miller at 12. The Staff has also excluded these miscellaneous deferred debits and credits, although the Staff has included deferred costs associated with its position on Bad Creek. Tr. vol. 5, Price at 88-89. The Company has not provided this Commission with any reason as to why its proposal in this regard should be adopted. Therefore, we will adopt Mr. Miller's position, and eliminate the Company's proposal from consideration in working capital.

B. Unclaimed Funds

Consumer Advocate witness Miller testified that unclaimed funds represent amounts which have never been claimed by the contributors, i.e., a customer deposit which is never returned by the Company could eventually become an unclaimed fund. In the addition, since these unclaimed funds are a non-investor source of funds, they should be subtracted from rate base in the same manner that other non-investor sources of funds are subtracted. Tr. vol. 5, Miller at 52. Neither the Staff or the Company have reduced rate base with unclaimed funds.

We agree with Consumer Advocate witness Miller on this matter. As he indicates in his testimony, this recommendation is consistent with the Commission's precedent on this matter and we know of no reason why Duke Power's customers should not receive the same benefit realized from this reduction to rate base. The Company's jurisdiction rate base should be reduced by $213,890. Hearing Exhibit 36, Schedule PEM 2.4.

C. Louisiana Energy Services (LES) Adjustment

LES was formed in 1990, when Clariborne Energy Services, Inc., a Company subsidiary, entered into a partnership agreement with four other entities. The Company, through its subsidiary, has a 29% interest in the partnership. This partnership has as its objective the building of a privately-owned uranium enrichment facility in the United States. Currently, the partnership is developing a uranium enrichment facility in Homer, Louisiana.

The LES project is actually divided into two phases. The first phase is the venture phase and it consists of obtaining a license from the Nuclear Regulatory Commission (NRC), obtaining customers for its service, and lining up investors to finance the actual construction of the facility. The second phase is the actual construction phase.

The Consumer Advocate opposes the inclusion of costs associated with the LES project in the cost of service. Consumer Advocate witness Miller testified that he believes that it is premature to include the costs associated with this project in operating expenses at this time. Mr. Miller states that the Company still does not have a license to operate this project. Additionally, even after a license is received, the partners are going to decide whether or not to go ahead with the construction phase of this project. Even if the project goes into the construction stage, the Company has indicated that it intends to sell or redeem the majority of the investment at the end of the venture period. Thus, Mr. Miller goes on to point out, it could very well be that there will be no net costs that need to be recovered from the ratepayers, or certainly that the net costs might be less than the gross costs proposed for inclusion in operating expenses by the Company. Tr. vol. 5, Miller at 15-17.

The Staff also opposes the inclusion of any LES costs in the cost of service. Staff witness Price testified that the amounts proposed in this case are for a feasibility study undertaken from 1989 through 1991, the costs of which are almost completely amortized as of the date of this hearing. Therefore, since there are no further costs proposed for this study, the costs are non-recurring in nature. Moreover, in support of his position, Mr. Price also points out that the construction and operating licenses were not docketed by the NRC until May 15, 1991; the decision to go forward with this project is still dependent on obtaining reasonable financing as well as obtaining NRC approval; competitive pressure could force the Department of Energy (DOE) to reduce prices, making the LES project less beneficial to Duke and its ratepayers, this is entirely new technology to Duke, which has no previous experience in this area; and if Duke sells its interest in LES it will be treated as a reduction in investment. Tr. vol. 5, Price at 85-86.

We agree with the Consumer Advocate and the Staff on this matter. This is not a typical research and development project for which this Commission routinely allows the associated expenses to be included in test year operating expenses. For the reasons pointed out by Mr. Miller and Mr. Price, we will reduce total company test year operating expenses by $2,209,000 and jurisdictional operating expenses by $616,000. Id.

D. Write-Off of Abandoned Coley Creek Costs

The Company halted licensing and other preliminary survey and investigation work on the Coley Creek pumped-storage hydro-electric project and in January 1990, commenced an amortization of these costs over a five year period. Consumer Advocate witness Miller recommended that the abandoned costs be amortized over a five year period. Mr. Miller testified that a ten year period has been used by the Commission in previous cases because it provides a reasonable balancing of the costs between the Company and the ratepayer. Tr. vol. 5, Miller at 18-19.

The Staff has no objection to the use of either a five year or a ten year amortization period. Tr. vol. 5, Price at 92.

We agree with the Consumer Advocate concerning the ten year amortization period. We believe this period of time, as Consumer Advocate witness Miller has indicated, provides a reasonable balancing of the abandoned costs between the Company and the ratepayers. Moreover, a ten year amortization period is most consistent with our previous precedent concerning the amortization period of abandoned costs. See Duke Power Company, Order No. 84-108 at 30, dated February 22, 1984, in Docket No. 83-302-E. The Company's total company operating expenses should be reduced by $782,664 and its jurisdictional operating expenses by $203,493 in order to reflect a ten year amortization period. Hearing Exhibit 36, Schedule PEM 3.2.

E. Annualization of Non-Fuel O&M Expenses

The Company increased test year expenses by $3,276,000 on a total company basis and by $859,000 on a jurisdictional basis in order to annualize O&M expenses other than fuel, purchased power, and wages and benefits based on growth in customers during the test period. Consumer Advocate witness Miller testified that the Commission should reject the Company's proposed adjustment because it does not meet the known and measurable ratemaking standard, and because it is in consistent with previous Commission decisions. Tr. vol. 5, Miller at 20-22. The Staff also opposes this adjustment. Tr. vol. 5, Price at 79.

The Commission has rejected similar Company proposal in past cases and it has not been presented with any new evidence in this proceeding that would persuade it to reverse its position. The Commission continues to believe that this adjustment does not meet the known and measurable ratemaking standard and as such is inconsistent with the Supreme Court's decision in Parker v. South Carolina Public Service Commission, 280 S.C. 310, 313 S.E. 2d 290 (1984).

F. Attrition Adjustment

In its initial filing, the Company proposed an attrition adjustment. However, in the supplemental testimony, the Company withdrew this adjustment and instead proposed to update O&M expenses for actual wage increases that had occurred since the end of the test year. Hearing Exhibit 22, at 3A.

The Staff and the Consumer Advocate oppose the Company's proposed adjustment to update for actual wage increases since the end of the test year. Staff witness Price testified that the salary increases not be included since they have not been audited. Tr. vol. 5, Price at 88. Consumer Advocate witness Miller testified that he did not accept any of the Company's updated numbers because the Consumer Advocate had not been presented with any workpapers in support of these amounts.

The Commission is of the opinion that these costs are not both known and measurable because no party other than the Company has had the opportunity to review them. If the Company desired to have these costs reflected, it should have made an attempt to provide the supporting amounts to the other parties so some review could be conducted. As it stands, these Company's unsubstantiated amounts are not known with enough specificity to be used to adjust test year operating expenses. To do so would be inconsistent with the Parker decision mentioned previously.

G. Operating Supplies and Expenses Adjustment

The Company adjusted test period operating expenses, primarily operating materials and supplies, to reflect what it considers to be a continual rise in units costs which occurred during the year. This adjustment increased total company test year operating expenses by

$11.2 million and jurisdictional test year operating expenses by $2.9 million.

The Consumer Advocate recommended that the Commission reject the proposed adjustment. Consumer Advocate witness Miller testified that the Company determined this adjustment by using the percentage increase of the year-end Consumer Price Index (CPI) for the test period. According to Mr. Miller, this is just another attrition adjustment and as a result it should be rejected because it does not meet the known and measurable standard and because the Commission's current ratemaking philosophies mitigate against the effects of unforeseen attrition. For example, year-end rate base is utilized and the Commission allows the depreciation expense associated with the year-end plant to be reflected in operating expenses. Further, the Commission permits the annualization of various expenses to reflect changes which have occurred beyond the end of the test year, as long as the costs being used are known and measurable, and reflective of normal, ongoing operations. Tr. vol. 5, Miller at 23-25.

The Staff also opposed the Company's proposed adjustment and does not believe this adjustment meets the known and measurable standard. Tr. vol. 5, Price at 80.

For the reasons previously discussed concerning the Company's similar adjustments, we reject the Company's proposed adjustment and adopt the positions advocated by the Consumer Advocate and the Staff.

H. Adjustment for Wages and Associated Benefits

The Company proposes to increase total company test year operation and maintenance expenses by $20.2 million and jurisdictional test year operation maintenance expenses by $5.3 million in order to account for an annualization of the increases in wage rates and related fringe benefits that occurred during the test year. The adjustment also reflects the change in payroll taxes due to test period wage increases and the change in the FICA tax base.

Although the Consumer Advocate agreed with the concept of recognizing wage increases which have occurred during the test year, in this proceeding it is the Consumer Advocate's position that no adjustment should be made. Consumer Advocate witness Miller testified that the Company had announced plans to reduce its work force by three percent through attrition by the end of 1991. Therefore, Mr. Miller stated that since the proposed adjustment gives no consideration to this work force reduction, it significantly overstates the wages and associated fringe benefits that the Company can expect to incur in the future. In addition, Mr. Miller showed that the number of total company employees had dropped from 19,995 at the end of the test year to 19,712 as of June

1991, for a reduction of 283 employees. Mr. Miller, concludes that since the Company's adjustment only recognizes increases in wage rates and does not recognize the reduction to the employee levels, it significantly overstates the wages that can be expected to be incurred in the future. Tr. vol. 5, Miller at 26-28.

The Company does not contest the Consumer Advocate's position that the employee levels will be reduced. Additionally, the Company acknowledges that the labor savings will be approximately 3% of the total payroll, although the Company believes that this savings will be more than offset by the increases in wages granted during 1991 between five and six percent. Tr. vol. 2, Lee at 16.

The Commission has consistently recognized that it is oftentimes necessary to adjust test year amounts in order to make them more representative of the costs which will be occurred in the future. In this regard, the Commission has oftentimes adjusted test year labor to reflect wage increases which have been incurred during or even outside the test year. Yet, the Commission is aware that a company's labor expense results from both the number of employees that it has as well as the salaries it pays. The Company proposes to recognize the changes in the salary levels but to leave the test year average employee levels unchanged. The Consumer Advocate contends that it is okay to change the salary levels but at the same time, some consideration should be given to the reduction in employee levels which is occurring (a reduction of 283 employees through June 1991) and that is expected to continue as agreed to by the Company.

Compounding the Commission's determination even further is the fact that the Company has not provided any data concerning savings which relate to the reduced employee levels. Tr. vol. 5, Miller at 27-28; Hearing Exhibit 36, Attachment 4. Even though the Company contends that a 3% reduction will be more than offset by a 5 to 6% increase in wages, the Company has not presented the Commission with any evidence to support its claim. Considering the fact that the Company filed other supplemental testimony, this data could have easily been provided. Moreover, the Company did not challenge the testimony of Consumer Advocate witness Miller that the reduced employee levels would more than offset the wage increases seeking to be recognized by the Company.

The Commission is thus faced with two conflicting testimonies and has no way of determining which position is the more correct one. Since the Commission can not be assured that the unadjusted test year amounts are less reasonable that the Company's proposed adjusted ones, we will reject the Company's proposed adjustment. We will also remind the Company that the Commission must base its decision on the evidence of record and that it has the burden of proof in such matters. See, Hamm v. South Carolina Public Service Commission and South Carolina

Electric and Gas Company, 298 S.C. 309, 380 S.E.2d 428 (1989).

I. Employee Moving/Relocation Expenses

Each year the Company incurs expenses associated with moving and relocating employees at different work stations. Additionally, the Company incurs expenses for moving new employees which have been hired during the calendar year. The test year costs associated with these moves/transfers amounted to $5,713,867. Tr. vol. 5, Miller at 31. Consumer Advocate witness Miller filed testimony that showed that the test year amount is considerably higher than similar costs for the previous four year period, and that the costs fluctuated from year to year. As a result, Mr. Miller stated that it is important that any abnormally low or high expenditures be normalized for ratemaking purposes in order that the test year expenditure will be as representative as possible of the expenses that are anticipated to be incurred during the time the rates are in effect. In this instance, Mr. Miller recommended that the five year average expenditure be used to determine a reasonable amount for ratemaking purposes. Id. at 32.

The Company takes no exception to the five year expenditures and in addition agrees that there is a pretty wide fluctuation between the various amounts. Tr. vol. 4, Stimart at 51. Moreover, the Company never challenged the position raised by the Consumer Advocate, either through cross-examination of Mr. Miller or through rebuttal testimony.

As discussed previously in this Order, the Commission has a responsibility to make its decisions on the basis of the record before it. The Consumer Advocate has raised an issue that no other party has challenged. Beyond this, we are of the opinion that the Consumer Advocate's position is consistent with this Commission's long-standing precedent of normalizing extraordinary expenditures, as well as with the Parker decision. Therefore, we will reduce the test year operation and maintenance expenses by $1,750,727 on a total company basis and by $455,189 on a jurisdictional basis. Hearing Exhibit 3, Schedule PEM 3.3

J. Customer Growth Adjustment

The Consumer Advocate and the Staff have computed customer growth consistent with Commission precedent. The Company has used a different methodology. Hearing Exhibit 36, Attachment 1.

The Company has provided no justification that persuades the Commission to abandon its traditional method of determining customer growth for ratemaking purposes. Therefore, we find that the traditional method be used and that, in this proceeding, the customer growth factor is .87%. Hearing Exhibit 37 at 18.

K. Edison Electric Institute (EEI) Dues

The Company's per books total company expenses include $802,150 for EEI dues. Consumer Advocate witness Miller testified that it was his position that these dues and payments should not be included in operating expenses for ratemaking purposes unless they result in some direct and primary benefit to consumers. Additionally, Mr. Miller testified that he had reviewed the latest audit of EEI expenditures and found that EEI expended funds for charitable contributions, memberships in social and service club organizations, lobbying activities and advertising expenditures. According to Mr. Miller, the Commission typically eliminates these types of expenditures when they are incurred directly by a utility and he is not aware of any reason why they should not be excluded when they are incurred indirectly by an organization that the utility supports. Moreover, Miller noted that over 12% of EEI's budget relates to its Governmental Affairs Group, which, among other things, conducts lobbying activities for the Institute, develops plans for industry-sponsored regulatory and legislative proposals, seeks support for allied groups for industry-supported legislation and regulations, and operates a legislative data base. Mr. Miller concludes that, since a significant portion of the EEI activities do not provide a direct and primary benefit to consumers, and absent some showing by the Company as to why it has not excluded those EEI activities which do not provide any direct and primary benefit, that full exclusion of these costs are warranted. Tr. vol. 5, Miller at 35-38.

The record indicates that the Company has not conducted any independent studies of its own to determine what portion of the EEI dues should be charged below the line, but instead has used only the letter received from EEI itself to make this determination. Furthermore, the Company's witness had not reviewed the EEI audit in any detail. In addition, even though the Company's witness was familiar with the fact that EEI has a Governmental Affairs Group, he did not know what the functions of the group were. Tr. vol. 4, Stimart at 60.

The Staff has proposed to exclude the portion of the EEI dues relating to the Media Communications Fund. Tr. vol. 5, Price at 80. It is this Commission's opinion that the Company has not provided substantial evidence to support the inclusion of EEI dues. As we noted in the Order on Remand of Order No. 88-864 (July 9, 1990), in Carolina Power & Light Company, Docket No. 88-11-E, absent some showing by the Company that the ratepayers benefit from these activities, the Commission has consistently determined that such activities should be eliminated from ratemaking purposes. Therefore, the Commission finds that the Consumer Advocate's adjustment (which also incorporates the adjustment proposed by Staff) to exclude EEI dues should be accepted. The test year operation and maintenance expenses should be reduced by $802,150, on a total company basis and by $208,559 on a jurisdictional basis. Hearing Exhibit 36, Schedule PEM 3.4.

L. Advertising Expense

Both the Consumer Advocate and the Staff have made proposals to exclude portions of the Company's advertising expenses. Consumer Advocate witness Miller testified that the advertising expenditures he proposed to exclude fell into three categories: (1) ads which were of a goodwill or image building nature; (2) ads that are in effect contributions to various organizations and would be more appropriately charged directly to Account 426, and; (3) a billing error in the month of December. Tr. vol. 5, Miller at 39-41. The Staff also reclassified certain advertising expenditures below the line. Tr. vol. 5, Price at 80.

The Company's witness admitted that a number of the costs questioned by both the Consumer Advocate and the Staff are of a philanthropic nature or a "gray" nature, and that he wished that they had charged them below the line so that the discussion over them would not have occurred. Tr. vol. 4, Stimart at 87-89.

The Consumer Advocate and the Staff have presented evidence which indicates that the questioned costs do not provide any direct and primary benefit to ratepayers and that they are not necessary in order to provide electric service. The Company presented no evidence to the contrary; nor did it challenge these positions through cross examination. As noted in our discussion of EEI dues, the Company has the responsibility to demonstrate that its costs benefit ratepayers. The Company has not done so and we find that the costs questioned by the Consumer Advocate and Staff should be eliminated for ratemaking purposes. The test year operation and maintenance expenses should be reduced by $422,448 on a total company basis and by $109,836 on a jurisdictional basis. Hearing Exhibit 36, Schedule PEM 3.5. This reduction incorporates both the recommendations of the Consumer Advocate and the Staff.

M. Lobbying Expense

The Consumer Advocate has raised a question concerning the Company's lobbying expense. Consumer Advocate witness Miller testified that even though the Company has charged a portion of two registered lobbyists below the line, it has failed to account for all lobbying expenses. Mr. Miller noted that the Company's Department of Public Affairs, in addition to being headed up by a Vice President, has four other employees with these titles: Director, North Carolina Government Affairs; Director, South Carolina Government Affairs; Director, Federal Government Affairs; and Director, Legislative and

Environmental Affairs. Moreover, Mr. Miller noted that these directors have essentially the same functions and that the functions which are indicated in their job descriptions consist of contacting public officials in order to "influence the passage, defeat, or amendment of legislation of interest to the Company." Yet, despite the similarity of the job functions, the Company has only charged a small portion of the Directors of North Carolina and South Carolina Government Affairs below the line as lobbying expense. Mr. Miller is of the opinion that all lobbying expenses be charged below the line, although he realized that there is some question of whether or not all of the mentioned employees spend 100% of their time engaged in lobbying activities. On the other hand, Mr. Miller stated that it was his opinion that the small portion charged below the line by the Company was not representative of the lobbying related efforts conducted by other employees in the Public Affairs Department, as well as of the two Directors whose salaries were partially charged below the line. For these reasons, Mr. Miller recommended that 50% of the Public Affairs Department expenses be charged below the line. Tr. vol. 5, Miller at 42-43.

The Company stated that the salaries of the other employees were not charged below the line because they are not registered lobbyists. Yet, the Company's witness also admitted that all of the job descriptions are essentially the same. Tr. vol. 4, Stimart at 52-56.

The Commission has reviewed the evidence of record and must agree with the Consumer Advocate on this matter. The question is not whether or not an individual is officially registered as a lobbyist but instead is whether or not an individual is engaged in an activity that does not provide a direct and primary benefit to ratepayers. For example, the job description of the Director, Federal Government Affairs reads as such: "Contacts and confers with members of the North and South Carolina Congressional Delegations and their staffs as well as other members of the U.S. Congress to influence the passage, defeat or amendment of legislation and interest to the Company." Id. It may be true that this individual has not engaged in "officially" lobbying these delegations, but it is certainly evident that this individual, as well as the other individuals mentioned, are engaged in activities that are not always directly beneficial to the ratepayer and that are always in the interest of the Company.

Thus, we find that the Consumer Advocate's recommendation of a 50-50 sharing of these costs to be reasonable. This procedure is a recognition that some of the Public Affairs Department's activities benefit the ratepayers while some of them also are of benefit to the stockholders and the Company. Additionally, once again the Commission reiterates that its decisions must be based upon the record in this proceeding and the evidence demonstrates overwhelmingly that the portion of lobbying expense charged below the line is significantly understated. The Company's test year operation and maintenance expenses should be reduced by $220,000 on a total company basis and by $57,200 on a jurisdictional basis. Hearing Exhibit 36, Schedule PEM 3.6.

N. U.S. Council for Energy Awareness Dues

The Company is a member of the U.S. Council for Energy Awareness (USCEA) and incurred expenses of $1 million during the test year for this membership. Consumer Advocate witness Miller recommended that this cost be excluded from test year operation and maintenance expenses because it provides no direct and primary benefit to consumers. Mr. Miller noted that the USCEA has as its primary function the promotion of nuclear energy and that this cost should not be the responsibility of the ratepayers. Tr. vol. 5, Miller at 44.

The Company acknowledges that the USCEA has as its main interest "the advancement and the communicating to the public what I would characterize as a favorable nuclear image." Tr. vol. 4, Stimart at 82-83.

The Commission agrees with the Consumer Advocate on this matter. In so concluding, the Commission is not taking a stand against nuclear power. To the contrary, the Commission has approved the inclusion of nuclear capacity and energy costs for this Company as well as for other companies it regulates. Yet, the Commission is aware that nuclear power is a controversial subject that is being discussed throughout the country. Therefore, the Company's ratepayers should not be forced to bear the costs of an organization that has as its aim the creation of a favorable public image. To allow this expense would be akin to allowing public image advertising or lobbying costs, and the Commission has a long-standing policy for excluding such costs from the cost of service and will do the same for this cost. The Company's test year operation and maintenance expenses should be reduced by $1,000,000 on a total company basis and by $260,000 on a jurisdictional basis. Hearing Exhibit 36, Schedule PEM 3.7.

O. Property Tax Adjustment

The Company proposes to increase test year property taxes on plant in service at December 31, 1990. The adjustment increases total company property taxes by $6.8 million and jurisdictional property taxes by $2.3 million. The Consumer Advocate opposes this adjustment because it does not meet the known and measurable ratemaking standard. Tr. vol. 5, Miller at 45.

We must agree with the Consumer Advocate on this matter. The Commission has consistently allowed adjustments of this nature. However, in recognizing such adjustments, the Commission has also consistently held that such adjustments must meet the known and measurable ratemaking standard and in doing to be consistent with the previously mentioned Parker decision. The evidence of record shows that this adjustment is an estimate and as such is not known with any specificity and therefore does not comport with the known and measurable ratemaking standard. Hearing Exhibit 36, Attachment 6.

P. Increases in Officers' Salaries

Both the Consumer Advocate and the Staff have recommended that increases granted to officers during the test year be excluded from test year operating expenses. Tr. vol. 5, Miller at 46 and Price at 86.

It has been the Commission's policy in previous Duke Power proceedings, as well as in other major utility proceedings, to exclude increases in officers' salaries from test year operation and maintenance expenses. We have been presented with no evidence that would persuade us not to do likewise and will order the same. The Company's test year operation and maintenance expenses should be reduced by $701,000 on a total company basis and by $180,000 on a jurisdictional basis. Hearing Exhibit 37, at 15.

Q. Post Retirement Benefits Other Than Pensions

Post retirement benefits other than pensions consists of all other forms of benefits provided by an employer to retired employees, their beneficiaries and dependents. Current generally accepted accounting principles (GAAP) require that the Company pay for these costs on a pay-as-you-go-basis. However, Financial Accounting Standards No. 106 (FASB 106) will require that the Company must accrue, during the years that the employees render the necessary service, the expected costs of providing those benefits to employees. FASB 106 is effective for fiscal years beginning on or after December 16, 1992. The Company proposes to adjust test year operating expenses to reflect the impact of FASB 106. This adjustment will increase total company expenses by $14.7 million on a total company basis and by $3.8 million on a jurisdictional basis. Tr. vol. 2, Stimart at 161-162.

The Consumer Advocate opposes the Company's proposed adjustment. Consumer Advocate witness Miller testified that in his opinion that the proposal is premature at this time. First, the Company is not required to implement FASB 106 until 1993. Therefore, Mr. Miller saw no reason to burden the ratepayers with an additional $21.7 million on a total company basis in this proceeding when there is no reason to do so. Instead, Mr. Miller recommended that the Company be given permission to defer the additional costs associated with the implementation of FASB 106 when the costs actually become known and when they become effective. In this manner, the Company will not begin to pass on higher costs that are not necessary; but, at the same time, the Company will be able to defer the higher costs that will become effective in 1993, until its next rate case. Tr. vol. 5, Miller at 47-49.

The Company acknowledges that there is no mandate to implement FASB 106 earlier than for accounting years beginning after December 16, 1992, but it believes that the Securities and Exchange Commission, as well as the Financial Accounting Group, encourage this early adoption. Tr. vol. 4, Stimart at 61-64.

The Commission has previously had the opportunity to consider this issue. See GTE South, Inc., Order No. 91-412 in Docket No. 90-698-C. However, in that proceeding the Company had proposed to recover 1/3rd of the increase occurring because of the switchover in order to reduce the impact of the full effect which would occur if the flash cut method were used (full recognition at the switchover point).

In this proceeding, there has been no evidence presented that the Company is attempting to reduce the impact of FASB 106. To the contrary, the evidence shows that the Company will be expecting consumers to pay out an additional $21.7 million (including amounts capitalized) over a year earlier than necessary. The

Commission respects the opinions of the SEC and Financial Standards Board concerning early implementation of FASB 106. However, the Commission must remind these entities, as well as the Company, that it is not the Company that will pay for these additional costs, but the ratepayers. Therefore, it is the Commission's opinion that if there is not compelling reason to implement this proposal over one year earlier than necessary, that the Company's proposal should be denied. Furthermore, we will adopt the Consumer Advocate's proposal that the effects of FASB 106 be deferred once it is implemented so that the Company will have the opportunity of recovering these additional costs in its next rate case.

R. Storm Damage Costs

The Company experienced two major storms in 1989, the first was a tornado in May and the second was Hurricane Hugo in September. The Company requested and the Commission granted it permission to defer the abnormal costs associated with these storms and to amortize these deferred costs over a five year period. The amortization began in January 1990, so the test year reflects a full years' amortization. Tr. vol. 5, Miller at 50.

The Consumer Advocate recommends that the annual amortization be reduced by the portion of the normal labor and associated benefits percentage that are already built into rates. Consumer Advocate witness Miller testified that the Company actually set up the deferral to include the regular labor-related costs. Yet, Mr. Miller stated that the normal labor and associated costs are already reflected in a normal cost of service for ratemaking purposes and as a result are already built into rates. Tr. vol. 5, Miller at 50-51.

Once again the Commission has been presented with uncontroverted testimony. The Company questioned Mr. Miller over his knowledge of whether or not the storm damage costs were directly assigned but did not provide any testimony of whether or not they were directly assigned or if it made any difference. Mr. Miller responded that he did not believe that it made any difference and that the 10.2% that he excluded was not an allocation but instead was a labor adjustment. Tr. vol. 5, Miller at 62-64.

The evidence overwhelmingly supports the Consumer Advocate's position on this matter and we adopt it accordingly. The test year operation and maintenance expenses should be reduced by $466,315 on a total company basis and by $121,242 on a jurisdictional basis. Hearing Exhibit 36, Schedule PEM 3.9.

S. Schedule J Adjustment

The Company initially filed testimony in support of recognizing the annual level of capacity billings by Duke under the contract between Carolina Power and Light Company (CP&L) and the Company for the sale to CP&L of 400 MW of capacity. The Company recommended that the billings resulting from the Schedule J contract be used as a reduction to the cost of service. Additionally, the Company proposed to treat the Schedule J amounts as a rider to the rate schedules. Tr. vol. 2, Stimart at 159-161.

However, the Company later stated that a dispute had developed between the two parties and that CP&L had informed the Company that it did not intend to make any of the discussed payments. As a result, the Company is now recommending that the adjustment be eliminated and that if, and when, any money is received from CP&L that it be established in a deferred account until the Company renders another recommendation concerning any amounts received. Tr. vol. 4, Stimart at 32.

The Commission agrees with the Company that the proposed adjustment should be withdrawn at this time and that the Company should defer any revenues ultimately received from the sale to CP&L. Additionally, the Commission instructs the Company to keep it informed of any changes in the current situation and to notify it if, and when, payments start being received. At that time, the Commission will consider reducing the Company's rates by a rider that will recognize the additional revenues being realized by the Company.

T. Demand-Side Management Program (DSM) Expenses

In its Application and prefiled testimony, the Company proposed recovery of $6.475 million for recovery of DSM costs. See Tr. vol. 2, Denton at 95. From the description offered by Company witness Denton, these costs related to programs that are expected to be expended. At the outset of the hearing, the Company, Commission Staff, and Consumer Advocate, introduced as Hearing Exhibit 1 a Stipulation relating to those particular expenses. Under the terms of that Stipulation, these costs would be entered into a deferral account and accrue carrying costs so that at some point in the future the Company may seek recovery of them for those programs. Upon review of the Stipulation and given its decision below, the Commission hereby approves this Stipulation.

This in no way suggests that the Commission is ultimately going to allow in rates the actually expended portions of the $6.475 million plus carrying costs. The Company will have to demonstrate the cost effectiveness of these programs in accordance with the Commission's recently approved Integrated Resource Planning (IRP) Procedures in its Docket No. 87-223-E. The Commission is hereby accepting as per book amounts the 1990 DSM expenses, while allowing inclusion in the deferral account of the additional $3.911 million referenced in witness Stimart's supplemental exhibit, Hearing Exhibit

22, as well as in Hearing Exhibit 1. The Commission has determined this approach is proper for several reasons.

First, the Company provided no workpapers to support the $3.911 million as known and measurable expenses. Therefore, the Commission should not include them in rates since they do not meet that standard. Parker v. South Carolina Public Service Commission and South Carolina Electric and Gas Company, 280 S.C. 310, 313 S.E. 2d 290 (1984); Tr. vol. 5, Miller at 29-30 and Tr. vol. 6, Miller at 152-53. The Commission notes that Company witness Stimart indicated he would provide workpapers to support all adjustments on his supplemental exhibit 3; however, these were not provided to be included in the record. See Tr. vol. 4, Stimart at 71.

Second, the Commission notes that this is the first instance in which a Company has been before it following approval of the newly approved IRP procedures. Under those procedures, Duke will file its first IRP next April under those procedures. Even given the lack of underlying factual support for these additional DSM costs, the Commission is still desirous of giving Duke the benefit of the doubt with respect to the potential cost effectiveness of this level of expenditures for these or other DSM programs. However, the Commission does not have adequate information to measure the cost effectiveness or, in effect, the prudence of these expenditures and may not have information to do so concerning them next April following the filing of the Company IRP. Therefore, the fact that some of these programs have previously been tariffed by the Commission is not controlling.

Cost effectiveness is a performance-based concept and under the terms of the IRP procedures, the Commission retains its authority in such matters. Consumer Advocate witness Chernick described the failure of Duke to establish the cost effectiveness of its DSM programs, including its load management programs (interruptible contract, residential load control, and standby generators). Tr. vol. 6, Chernick at 142-49. Therefore, to the extent that these programs may have previously been tariffed by the Commission and this tariffing created any presumption of prudence, Consumer Advocate witness Chernick rebutted it. Id. In addition, as Consumer Advocate witness Chernick noted, the Company chose not to submit its existing IRP for regulatory review and beyond that failed to establish that its approach is truly "least-cost." Tr. vol. 5, Chernick, at 216.

Third, the Commission wishes to ensure that consumers and the Company are better off by both adoption of these IRP procedures in Docket No. 87-223-E and their incorporation. Given this significant public policy objective, the Commission will not rush to judgment regarding the appropriateness of DSM expenditures at this time. The record simply will not support cost recovery of the $3.911 million beyond the per book amounts of approximately $5.6 million in this proceeding already accepted herein by this Commission.

The Commission realizes that the jurisdictional electric utilities will be filing their plans, as mentioned above, under the new IRP procedures by next April. This case, however, offered the Commission the opportunity to receive testimony and exhibits from interested parties concerning Duke's DSM efforts. The Commission suggests that Duke commence immediately assessing more carefully its DSM programs, based on the observations by Consumer Advocate witness Chernick. See Tr. vol. 6, Chernick, at 142-151. For example, Duke has not structured certain of its programs aggressively to increase heat-pump efficiency or increase wall insulation standards. Nor has Duke restricted the dual-fuel program to oil heated houses, as Mr. Denton says Duke intends, or extended its MAX incentives to air conditioners in fossil-heated homes, to remove the promotional incentives for heat pumps. Id. Therefore, the Commission puts the Company on notice that it should do the following immediately in order to enhance its subsequent chances for rate recovery of at least portions of its deferred amounts. These include: increasing the required heat-pump efficiency at least to 11; increasing the wall insulation standards at least to R-19; restricting the dual-fuel program to oil-heated homes; and extending the MAX incentives to air conditioners.

III. CAPITAL STRUCTURE

To provide Duke Power Company with an opportunity to earn a fair and reasonable return on its South Carolina investment, the Commission must determine what capital structure is appropriate for ratemaking purposes. The Company proposes its actual capital structure as of December 31, 1990, consisting of 40.5% debt, 9.7% preferred stock, and 49.8% common equity.

The Commission notes that the equity ratio proposed by the Company reflects a substantial increase since the Company's last rate case. Since the end of 1986, the equity ratio has increased from 47.2% to 49.8%. Tr. vol. 2, Osborne at 67. The Commission also notes that there has been a trend towards higher equity ratios of other major utilities operating in South Carolina. All other things equal, a higher equity ratio will result in a higher cost of capital and higher rates for the ratepayers of the State. This is of great concern to the Commission.

Consumer Advocate witness Legler investigated the reasonableness of the Company's proposed equity ratio and found that it approximates the average equity ratio for double-A rated electric utilities. Tr. vol. 6, Legler at10. This Commission has in the past adopted actual capital structures, noting its concerns about unilateral changes which may result in excess burdens on the ratepayers. At this point, the Commission has not been presented with convincing evidence that the Company's proposed capital structure is unreasonable. The Commission will, therefore, adopt the Company's actual capital structure as of December 31, 1990, as the basis for setting rates in this case.

The Commission will, however, consider the Company's conservative balance sheet as a factor in setting the cost of equity as recommended by Consumer Advocate witness Legler. Tr. vol. 6, Legler at 10. Further, the Commission will monitor the capital structure of Duke Power Company and consider the appropriateness of adjusting the capital structure or adopting a hypothetical capital structure in future rate cases. The Commission encourages the parties to consider this issue in future rate cases.

IV. COST OF CAPITAL

A. Cost of Debt

The Commission is of the opinion that the cost of debt should match the capital structure it adopts. The embedded cost of debt as of December 31, 1990, was

8.78%. The Commission has consistently excluded short-term debt in calculating the embedded cost of debt and continues this practice in this case. The Commission concludes that the proper embedded cost rate for long-term debt is 8.78%.

B. Cost of Preferred Stock

The Company proposed an embedded cost for preferred stock as of December 31, 1990, of 7.75%. Although it is of little consequence, the Commission notes an inconsistency brought to its attention by Consumer Advocate witness Legler. The Company's response to the Staff Information Request, Item 7 and Company witness Stimart's Exhibit 1, page 2, both indicate an embedded cost rate for preferred stock of 7.74%. The Commission concludes that the proper embedded cost rate for preferred stock is 7.74%.

C. Cost of Equity

One of the principal issues in virtually any rate case involves the proper earnings to be allowed on the common equity investment of the regulated utility. This case is no exception. In this proceeding, the Commission was offered the expert testimony of three witnesses as to the fair and reasonable rate of return on common equity for Duke Power Company. These financial experts presented detailed testimony on the various methodological approaches that are generally used to estimate the cost of equity.

The Commission's analysis of the evidence regarding the appropriate return on common equity in this case must be guided by the constitutional principles set forth by the Supreme Court of the United States in Bluefield Water Works and Improvement Co. v. Public Service Commission of West Virginia, 262 U.S. 679 (1923) and Federal Power Commission v. Hope Natural Gas Company, 320 U.S. 591 (1944). All of the cost of capital witnesses in this case subscribe to the principles set forth in these landmark decisions.

Although this Commission does not adhere to any particular theory, method, or technique for the estimation of the cost of equity, it does test the reasonableness of the expert witnesses against these legal standards. It is with these standards in mind that the Commission fulfills its obligation to carefully evaluate the testimony it is presented.

The Commission heard the testimony of three witnesses on the cost of equity. The Company presented Dr. Roger Ibbotson, a Yale University professor and a principal in the form of Ibbotson and Associates. The Consumer Advocate presented the testimony of Dr. John B. Legler, a professor of Finance in the College of Business Administration at the University of Georgia. Dr. James E. Spearman, assistant public utilities economist of the

Commission Staff's Research Department, testified on behalf of the Commission Staff.

Company witness Ibbotson relied exclusively on the Capital Asset Pricing Model (CAPM) to arrive at his final recommendation. Dr. Ibbotson recommended a return on common equity of 13.17%, based on his revision from the witness stand. Consumer Advocate witness Legler utilized various methodologies including the Discounted Cash Flow (DCF) method and the risk premium approach to obtain his recommendation. Dr. Legler recommended a cost of equity of 12.25% based on a range from 11.7% to no more than 12.8%. Staff witness Spearman based his estimate of the cost of common equity on his application of the DCF model and the CAPM. The Commission notes that the CAPM is in the family of risk premium models. Dr. Spearman's recommendation of the cost of common equity for the Company was in a range from 12.0% to 12.5%. Tr. vol. 5, Spearman at 295.

While each witness subscribed to the principles of the Bluefield and Hope decisions, the respective methods used by witnesses presented the Commission with a broad range between 11.7%, the lowest end of the range recommended by Dr. Legler, and 13.17%, the recommendation of Dr. Ibbotson. In setting the allowed return on common equity, the Commission must judge the credibility and probative value of each expert witness's testimony and must use its own judgment in evaluating the evidence, a task well within the expertise of this Commission.

In reality, all of the witnesses have attempted to provide the Commission with their perceptions of the expectations of investors since they used market based approaches to estimate the cost of equity. Accordingly, the Commission must further evaluate these perceptions in light of its own knowledge of the financial markets, its knowledge of the financial condition of the Company, as well as the entire record of this proceeding.

In evaluating the evidence presented on the cost of equity, the Commission makes note of Dr. Legler's statement, a statement which he consistently makes and which this Commission has quoted in other orders:

> It is my opinion that the application of finance theory can provide help and guidance in the decision process, but that the issue of the fair rate of return is still largely judgmental. This is particularly true with respect to the return on equity component of the overall rate of return. Each finance theory suffers from the necessity of making crucial assumptions requiring judgment in the process of its application. Although proponents of any particular theory tend to minimize or even overlook the importance of the necessary assumptions, often the assumptions that are necessarily made are crucial to their results.

Tr. vol. 6, Legler at 3-4.

An examination of Dr. Ibbotson's testimony reveals that he used only one financial model, the CAPM, to develop his cost of equity recommendation. Although this method has long been accepted by this Commission, Dr. Ibbotson used no other method or analysis as a check on the reasonableness of his estimate based on this method. While that in itself does not constitute insufficient support for his recommended return, combined with other problems with his application of this method, leads the Commission to believe that the evidence presented by Drs. Spearman and Legler is preferred. Furthermore, the Commission notes that it made the same criticism of Southern Bell's cost of capital witness, Dr. Avera, in Order No. 91-595, Docket No. 90-626-C. The Commission further notes that Dr. Ibbotson used only one company, Duke Power Company, in his analysis. Thus, he presented no convincing evidence that his recommended return meets the test of comparable returns for enterprises with similar risks.

Unlike Dr. Ibbotson, both Dr. Spearman and Dr. Legler used other proxies to assist in estimating the cost of equity to Duke Power Company. In his risk premium analysis, Dr. Legler used a group of double-A rated electrics, and tested his estimated return for Duke against the average estimated return for this set of reasonably comparable companies. He further tested the comparability of Duke's riskiness compared to the riskiness of this group of companies. He used commonly used measures of risk recognized by this Commission in making these tests. For comparative purposes, Dr. Spearman applied both his DCF and CAPM analyses to

Moody's Electric Utility Index, comprised of twenty-four companies.

Although this Commission has found the CAPM an acceptable method of estimating the cost of equity, this Commission recognizes that it, like the other methods, suffers from the necessity of making judgments in its application and from basic assumptions which underlie the model. Some of these problems were discussed by Dr. Legler. Tr. vol. 6, Legler at 35-39. Indeed, while Dr. Ibbotson found the cost of equity using this method to be 13.17%, Dr. Legler, using input variables the Commission finds to be as acceptable as those used by Dr. Ibbotson, found the cost of equity to be in a range from 10.6% to 12.8%. Dr. Spearman also found a range using the CAPM, and his range was from 10.59% to 12.50%, reasonably close to the range found by Dr. Legler.

Because he failed to use another methodology to verify the results he obtained through the CAPM, and failed to provide any comparative analyses, the Commission finds that Dr. Ibbotson's recommendation should be given little weight in the determination of the appropriate cost of equity. Instead, the Commission will rely more heavily upon the studies conducted by Drs. Spearman and Legler.

Based on the information presented within the context of this rate proceeding specifically the rate of return studies of Drs. Spearman and Legler, the

Commission finds that a cost rate of 12.25% is the best point estimate of the Company's fair rate of return on common equity. Incorporating this rate, the adopted capital structure, and embedded cost rates results in an overall cost of capital of 10.41%. The rate of return on common equity herein found fair and reasonable falls within the ranges produced by Dr. Spearman and Dr. Legler. Despite a difference in the ranges of these two witnesses, the 12.25% adopted by the Commission approximates the midpoint of both their ranges.

The Commission believes that 12.25% represents a reasonable expectation for the equity holder, and, therefore, is consistent with the standards mandated by the Bluefield and Hope decisions. Further, the Commission is of the opinion that this rate is fair, reasonable, and sufficient to protect the financial integrity of the Company, permit the Company to attract capital on reasonable terms, permit the Company to provide reliable service, and at the same time is fair to ratepayers.

V. OVERALL RATE OF RETURN

The Commission has found that the capitalization ratios as of December 31, 1990, are appropriate and should be used in this proceeding. The Commission also has found that the embedded cost rate for long-term debt of 8.78% should be utilized in the determination of a fair rate of return. For purposes of this proceeding, the Commission finds the proper cost rate for the Company's common equity capital to be 12.25%.

Using these findings, the overall rate of return on rate base for the Company's South Carolina intrastate operations may be derived as computed in the following table:

TABLE

OVERALL RATE OF RETURN

	RATIO	COST	WEIGHTED COST
Long-term debt	40.5%	8.78%	3.56%
Preferred Stock	9.7%	7.74%	0.75%
Common Equity	49.8%	12.25%	6.10%
Total	100.0%		10.41%

VI. RATE DESIGN

A. Residential Rate Design

Duke proposed that revenues for the residential class as a whole be increased by 9.08%. Hearing Exhibit 2. Duke proposed that Schedule RE, which is for residential customers with electric water heating and space conditioning, be increased by 6.98% over present revenues. Id. Duke proposed that Schedule RS, which is for residential customers who take service which is not all-electric, be increased by 11.14% over present revenues. Id.

Consumer Advocate witness Lanzalotta testified that "increasing revenues less for Schedule RE service (6.98%) than the residential class as a whole (9.08%) tends to encourage the use of electric space heating and water heating..." Tr. vol. 5, Lanzalotta at 144-45.

Mr. Lanzalotta further testified:

> Schedule RE includes customers who are using electric air conditioning in addition to space heating. During summer months this would tend to encourage, through its lower tailblock energy rates, the increased use of air conditioning. Duke has used its growth in peak load to justify the construction of Bad Creek. This provides one rationale for equalizing the tailblock energy rates in Schedules RS and RE in an attempt to avoid such confusing price signals.
>
> While providing incentives to increase the use of electric heat through the design of Schedule RE rates will improve the load factor of Duke's system by increasing off-peak winter usage of electricity, this off-peak increase in electricity usage acts at cross-purposes to the advantage Duke envisions from the use of pumped storage hydro units.

Id. at 145.

While increasing the off-peak usage of electricity is typically considered to be advantageous, increasing the off-peak use of electricity on the Duke system is not necessarily compatible with the addition of the Bad Creek pumped storage facility. Mr. Lanzalotta testified:

> With Bad Creek, Duke Power Company will have more than 1,000 MW of pumped storage generating capacity on their system by 1992. Use of Duke's base-load generation during off-peak hours to pump water in these pump storage facilities will tend to increase off-peak usage of electricity and act to flatten out Duke Power Company's daily load curve. Providing

> incentives to increase off-peak usage of electricity only compounds this effect. As I discuss earlier, there are already indications that it will be many years before Bad Creek will be able to operate to its full potential on Duke's system. Increasing off-peak demands by means of incentives built into the rates could compound these effects.

Id. at 146.

Accordingly, the Commission, in an effort to avoid sending confusing price signals to residential customers, agrees that the increase applied to proposed Schedule RS be no larger than the increase applied to the residential rate class as a whole.

Additionally, the tailblock energy rate, which applies to the purchase of all energy over 1000 kWh in a month, is substantially higher under proposed Schedule RS than the tailblock energy rate under proposed Schedule RE. The tailblock energy rates under proposed Schedule RS range from 8.4741 cents per kWh to 8.9176 cents per kWh while the tailblock energy rates under proposed Schedule RE range from 7.0274 cents per kWh to 7.3953 cents per kWh depending on the category of service.

Mr. Lanzalotta further testified:

> This lower tailblock rate under Schedule RE encourages customers to increase their use of electric air conditioning thereby increasing Duke's peak growth.

Id. at 147.

Additionally, Company witness Denton agreed:

> Well, to the extent that everything else is held constant, then, a lower unit price will encourage additional kilowatt-hour usage.

Tr. vol. 2, Denton at 112.

The Commission agrees that the tailblock energy rate under proposed Schedule RE should not be less than the tailblock energy rate under proposed Schedule RS.

VII. NUCLEAR DECOMMISSIONING

A. External Fund Earning Rate Assumptions

Duke's rate increase request includes the annual revenue needed to fund its expected cost to decommission its ownership share of the seven nuclear units which Duke operates. This annual requirement reflects certain interest earning assumptions for the funds into which these annual contributions will be placed until the time that such funds are needed to pay for the decommissioning of these nuclear units. There are two "external" funds into which annual contributions earmarked for nuclear decommissioning are placed, a qualified external fund and an unqualified external fund. Both external funds reflect the expected costs to decommission the radioactive, or radiological, portions of the nuclear plants. The qualified external fund is characterized by the fact that annual contributions to the qualified fund are tax deductible, and by the fact that there are IRS requirements for the types of investments into which monies in the qualified may be placed. Annual contributions to the non-qualified external fund are not tax deductible, and there are no restrictions, comparable to those for qualified fund investments, on what kind of investments non-qualified in which fund monies may be invested.

These interest rate assumptions used for funds invested in the qualified and non-qualified external funds are important because they have a significant impact on the level of annual funding which is required so that the funds necessary for decommissioning are available to pay for such decommissioning. Tr. vol. 5 at 130. The annual contributions to these funds start in 1992, many years before such funds will actually be needed to pay for decommissioning. Tr. vol. 5 at 130. As Consumer Advocate witness Lanzalotta testified:

> ...even a seemingly small change in the interest rate which such funds are assumed to earn over the period during which such funds are held can have a significant impact on the level of annual contributions needed to pay for the expected costs of nuclear decommissioning.

Id.

Duke's filing reflects the assumption that money placed in the qualified external fund will earn interest at an after-tax rate equal to the assumed rate of general inflation which Duke assumes to be 4.5%. Id. at 131. Duke assumes an after tax earning rate of 1% in excess of its 4.5% inflation rate for money placed in non-qualified, external funds. Id. at 131.

Investments in qualified external funds must meet IRS requirements for "Black Lung" investments. These requirements permit investments in:

i) public debt securities of the United States,

ii) obligations of a state or local government which are not in default as to principal or interest, or

iii) time or demand deposits in a bank or an insured credit union located in the United States.

Id. at 131-132.

Duke based its after-tax interest rate assumption for its qualified, external funds on the after-tax rate for long-term "Bonds" and "T-Bills", adjusted for real inflation, but provided no studies of either the after-tax rate for bonds and T-bills or the rate of inflation. Id. at 132.

Consumer Advocate witness Lanzalotta presented a study of the ten year rate of inflation as reflected by the Consumer Price Index in which the average annual rate of inflation was determined to be 4.475%, a value which essentially confirms the 4.5% value which Duke uses. Id. at 134.

Consumer Advocate witness Lanzalotta also presented a ten year study of the after-tax yields of 10 year, 5 year, and 1 year Federal securities as well as a ten year study of the yields of tax-free North Carolina and South Carolina securities and 25% State securities which resulted in a Federal-South Carolina differential of 1.56% over inflation and a Federal-North Carolina differential of 1.53% over inflation. To be conservative, and to reflect the slight difference be between his calculated inflation as the basis for after-tax interest for monies invested in the qualified, external decommissioning funds. Id. at 134-138.

Regarding the earning rate assumption for the external, non-qualified fund, the Consumer Advocate and Duke took the position that the non-qualified fund investments should be able to earn a higher rate of interest, relative to inflation, than the qualified fund investments. Based on his analysis of the after-tax earning rate for "Black Lung" securities relative to inflation, Consumer Advocate witness Lanzalotta took the position that it is inconsistent to assume that investments related to the unqualified funds will earn at rates of interest lower than that of the qualified funds. Therefore, the Consumer Advocate proposes the earning rate assumed for the non-qualified external fund be no less than the earning rate assumption it develops for the qualified fund, 6.0%. Id. at 139.

Additionally, Duke made the offer, consistent with its position in its North Carolina jurisdiction, to periodically revisit and review the actual earning results for its external funds as compared to its earning rate assumptions and to make any necessary adjustments to assure adequate funding for decommissioning. Id. at 159.

The Commission agrees that a 4.5% inflation rate and a 6.0% earning rate assumption is reasonable for use in determining the annual funding required for the external qualified fund, and that at least a 6.0% earning rate assumption is reasonable for use in determining the annual funding for the external, non-qualified fund. The Commission further agrees that it is reasonable to review the actual earning rate performance of these funds every four years and make any adjustments necessary to assure that adequate funds are available to decommission Duke's nuclear plants.

B. Non-Radiological Decommissioning Costs

The Company's filing also includes costs for the decommissioning of the non-radiological portions of its nuclear power plants. Tr. vol. 3 at 144. In response to Consumer Advocate Interrogatory 1-25, the Company stated that:

> There are no known permit conditions, or other regulatory requirements which compel D.P.C. to decommission the non-radiological portions of the Catawba, McGuire, and Oconee nuclear stations.

Tr. vol. 3 at 137, Hearing Exhibit 9. It is within Duke's prerogative to completely decommission its nuclear sites, including the removal of non-radiological portions (Tr. vol. 3 at 138), but the exercising of this prerogative adds $215,000,000 (1990 dollars) to the estimated cost of decommissioning the Duke nuclear plants. (Duke Power Exhibits TSL-1, TSL-2, and TSL-3). The NRC does not require such decommissioning nor does it prevent conversion of the nuclear sites for use as power plant sites after the shut-down of present nuclear operations. Tr. vol. 3 at 140. Further, the NRC does not require that the estimated costs of removing and disposing of the non-radiological structures and material be included as part of decommissioning cost estimates for the NRC. Tr. vol. 3 at 142. Accordingly, the Commission finds that Duke should remove the non-radiological decommissioning costs from its estimates of the annual revenues required to fund the decommissioning of its nuclear plants.

C. Contingency Factor

The Company's filing includes costs for decommissioning its nuclear plants which are based on site-specific estimates performed by TLG Engineering. The estimates assume a 25% contingency factor, which is added to the total decommissioning cost. Tr. vol. 3 at 151. However, it was noted that when TLG actually bid on a fixed cost decommissioning project, it included a 10-15% contingency. Id. at 153. Additionally, the largest decommissioning project in the U.S. to date came in under estimate by almost 10 percent. Id. at 151.

Additionally, TLG used an estimating process which has been criticized in a recent NRC report because, among other things, assumptions used by TLG are not consistent with its earlier work for the Atomic Industrial Forum (AIF) and only use the high values set forth in the AIF estimating guidelines. This is also the case in the estimates done for Duke Power. See Id. at 171-173. The NRC report reads:

> The work difficulty factors used by TLG in developing the unit cost factors applied to each decommissioning task are applied at the upper bound of their ranges. If the work difficulty factors in the TLG estimate were reduced to their lower bound values, the TLG estimate would be reduced by 45 percent ...

Id. at 165.

In addition to the contingency which TLG incorporates through the use of the high work difficulty factors, the annual revenue requirements for decommissioning are based on the current 40 year license of the plants. Duke witnesses note that the Company is studying life extension, as are most other utilities. The effect of life extension would be to spread the decommissioning payments out over a longer period of time, thus reducing the annual revenue requirement.

For the reasons stated above, it is the Commission's belief that the total contingency factor used for nuclear decommissioning in this case should be reduced to 10 percent. This would have the effect of reducing the total decommissioning estimate by $154 million, with consequent effects on annual revenue requirements.